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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,199	10/11/2001	Robert C. Sundahl	42390P9821	1431

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EXAMINER

LUU, MATTHEW

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,199

Applicant(s)

SUNDAHL ET AL.

Examiner

LUU MATTHEW

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed 13 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) 20-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-11 and 13-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 1, 3-11, and 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding independent claims 1 and 11, line 3, recites "estimating the amount of degradation of one or more organic light emitting diodes (OLEDs)...; and adjusting the luminance of said one or more OLEDs based...upon said estimate. On the contrary, lines 7-9, recites "wherein adjusting...the luminance so that said luminance remains substantially constant substantially independent of the amount of degradation of said one or more OLEDs." (emphasis added). It is confusing since it is not clear why the amount of degradation of the OLED is detected for adjusting the luminance, but at line 9 of claim 1, the amount of degradation is ignored.

Dependent claims 3-10 and 13-19 are considered rejected for incorporating the defects from their respective parent claims 1 and 11 by dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-7, 10-11, and 13-18, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen et al (6,414,661) in view of Yamazaki et al (6,528,951).

Regarding claim 1, Shen discloses (Figs. 1-3 and 9) a method for at least partially compensating luminance of an emissive display comprising:

estimating the amount of degradation of one or more organic light emitting diodes (OLEDs) included in the emissive display (column 7, lines 19-27); and

adjusting the luminance of the one or more OLEDs based, at least in part, upon the estimate (see Abstract, lines 1-14).

The only difference between the disclosure of Shen et al and the claimed invention is that the claim requires adjusting the luminance so that the luminance remains substantially constant.

However, Yamazaki discloses (Fig. 24) of the luminance of an EL or (OLEDs) element is compensated to almost at a constant level irrespective of the temperature. See column 1, lines 18-22; and column 31, line 49 to column 32, line 14. It is obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of adjusting the luminance of an EL or OLED element at a constant level into the emissive display device of Shen to control the luminance of the OLEDs display elements at a constant level independent of the change in surrounding temperature.

Regarding claim 11, note the rejection as set forth above with respect to claim 1. Shen further discloses (Fig. 9) one or more OLEDs (display 93); a measurement circuit

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(voltage sensing 94); and a control system (control 97). Shen further discloses estimating the amount of degradation of one or more organic light emitting diodes (OLEDs) included in the emissive display (column 7, lines 19-27); and adjusting the luminance of the one or more OLEDs based, at least in part, upon the estimate (see Abstract, lines 1-14).

Regarding claim 3, 4, 13 and 15-17, Shen discloses (Fig. 9) the measuring the voltage across one or more OLEDs (column 7, lines 50-61).

Regarding claims 5 and 14, 18 since Shen mentions that the calculation is based on either in the amount of the drive current or voltage (see abstract, lines 7-13), it is obvious to a person of ordinary skill in the art to recognize that the calculation can be in term of the measured reverse bias resistance since it is well-known that the resistance is proportional to the current or voltage.

Regarding claim 6, since Shen mentions that the calculation is based on either in the amount of the drive current or voltage (see abstract, lines 7-13), it is obvious that the calculation can be in term of the electrical energy since the energy is well-known to be calculated using the known current or voltage.

Regarding claim 7, Shen mentions that the calculation is based on either in the amount of the drive current or voltage (see abstract, lines 7-13).

Regarding claim 10, Shen discloses estimating the amount of degradation of one or more organic light emitting diodes (OLEDs) included in the emissive display (column 7, lines 19-27); and adjusting the luminance of the one or more OLEDs based, at least in part, upon the estimate (see Abstract, lines 1-14).

Claim Rejections - 35 USC § 103

Claims 8-9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen (6,414,661) in view of Yamazaki et al as applied to claims 1 and 11 above, and further in view of Kane (6,229,508).

Regarding claim 8, Shen fails to disclose the step of adjusting using a look up table (LUT).

However, Kane discloses the method of adjusting the brightness of the OLEDs using a look up table (LUT) (column 17, lines 6-15). It would have been obvious to the person of ordinary skill in the art to use the look up table of Kane into the luminance adjusting system of Shen since this is only another alternative way of using the look up memory or a storage medium to adjust the voltage values.

Regarding claim 9, Shen further discloses the luminance of the OLED achieved by the adjustment essentially decreases over time. See column 7, lines 15-18; and column 8, lines 35-40.

Regarding claim 19, note the rejection as set forth above with respect to claim 8. Furthermore, the LUT can also be considered as the claimed storage medium.

Response to Arguments

Applicant's arguments with respect to claims 1, 3-11, and 13-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUU MATTHEW whose telephone number is (703) 305-4850. The examiner can normally be reached on 9 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RAZAVI MICHAEL can be reached on (703) 305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Luu

A handwritten signature in black ink, appearing to read 'Matthew Luu', with a stylized flourish at the end.

MATTHEW LUU
PRIMARY EXAMINER